

5

CLAIMS

What is claimed is:

- Sub 1/2
10
1. A transparent, paramagnetic label for an article, the label being essentially free of optical detection by a person with 20/20 vision from a distance of 3 feet or more comprising composition comprising polymer complexed with a sufficient amount of one or more rare earth ions selected from the group consisting of elements 64 - 69 to provide a polymer composition magnetic mass susceptibility of greater than 20×10^{-6} emu/g measured at 298°K.
 - 15 2. A transparent, paramagnetic label for an article, the label being essentially free of optical detection by a person with 20/20 vision from a distance of 3 feet or more comprising composition comprising polymer complexed with one or more rare earth ions selected from the group consisting of elements 64 - 69, the amount of rare earth ions being greater than 9 weight percent based on the total weight of the transparent, paramagnetic polymer.
 - 20 3. A transparent, paramagnetic label for an article, the label being essentially free of optical detection by a person with 20/20 vision from a distance of 3 feet or more comprising composition comprising polymer complexed with one or more rare earth ions selected from the group consisting of elements 66 - 67, the amount of rare earth ions being at least 5 weight percent based on the total weight of the transparent, paramagnetic polymer.
 - 25 4. The transparent, paramagnetic label for an article of claim 1, 2, or 3 wherein the transparency is such that it is possible to transmit at least 55% of the incident light/radiation through a 1/8 inch thick test piece of the label material for greater than 50% of the wavelengths in the range of 400 to 30 1800 nanometers (nm).
 5. A method of labeling an article comprising the steps of
 - (a) applying a label composition comprising a polymerization initiator and a monomer composition comprising polymerizable monomers and source of one or more rare earth ions selected from the group consisting of elements 64 - 69 to the article; and then
 - 35 (b) curing the label composition to form a transparent, paramagnetic polymer label; wherein

5 resulting transparent, paramagnetic polymer label comprises polymer
complexed with a sufficient amount of one or more rare earth ions
selected from the group consisting of elements 64 - 69 to provide a
polymer composition magnetic mass susceptibility of greater than 20×10^{-6} emu/g measured at 298°K.

10 ~~6.~~ A method of labeling an article comprising the steps of

(a) applying a label composition comprising a polymerization
initiator and a monomer composition comprising polymerizable
monomers and source of one or more rare earth ions selected
from the group consisting of elements 64 - 69 to the article; and
then

(b) curing the label composition to form a transparent, paramagnetic
polymer label; wherein

resulting transparent, paramagnetic polymer label comprises polymer
complexed with the amount of one or more rare earth ions selected
from the group consisting of elements 64 - 69 based on the total weight
of the transparent, paramagnetic polymer label being greater than 9
weight percent.

~~7.~~ A method of labeling an article comprising the steps of

(c) applying a label composition comprising a polymerization
initiator and a monomer composition comprising polymerizable
monomers and source of one or more rare earth ions selected
from the group consisting of elements 64 - 69 to the article; and
then

(d) curing the label composition to form a transparent, paramagnetic
polymer label; wherein

resulting transparent, paramagnetic polymer label comprises polymer
complexed with the amount of one or more rare earth ions selected
from the group consisting of elements 66 - 67 based on the total weight
of the transparent, paramagnetic polymer label being greater than 5
weight percent.